

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gilles P. van Wezel et al.

Serial No.: To be assigned

Filed: December 26, 2000

For: REDUCING BRANCHING AND
ENHANCING FRAGMENTATION IN
CULTURING FILAMENTOUS
MICROORGANISMS

Examiner: To be assigned

Group Art Unit: To be assigned

Attorney Docket No.: 4666US

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number. EL 740534360 US

Date of Deposit with USPS: December 26, 2000

Person making Deposit: Leah Smith

Preliminary Amendment

Box Patent Application
Commissioner for Patents
Washington, D.C. 20231

Sir:

Before calculation of the filing fee, please amend the referenced application as follows:

IN THE SPECIFICATION:

Page 3, line 17, please insert "DISCLOSURE OF THE INVENTION".

Page 4, line 29, please insert "DETAILED DESCRIPTION OF THE INVENTION".

IN THE CLAIMS:

1. (Amended) A method for producing a filamentous bacterium exhibiting reduced branching and fragment septation during growth, [particularly growth in a liquid medium,] said method comprising:

providing a filamentous bacterium, said filamentous bacterium lacking significant endogenous ssgA activity, with the capability of having or expressing heterologous SsgA-activity, which activity, in *Streptomyces griseus*, is encoded by an ssgA gene having at least the sequence:

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1 ATGCGCGAGTCGGTTCAAGCAGAGGTCATGATGAGCTTCCTCGTCTCCGA
51 GGAGCTCTCGTTCCGTATTCCGGTGGAGCTCCGATACGAGGTCGGCGATC
101 CGTATGCCATCCGGATGACGTTCCACCTTCCCGGCGATGCCCCTGTGACC
151 TGGGCGTTTCGGCCGCGAGCTGCTGCTGGACGGGCTCAACAGCCCGAGCGG
201 CGACGGCGATGTGCACATCGGCCCCGACCGAGCCCGAGGGCCTCGGAGATG
251 TCCACATCCGGCTCCAGGTCGGCGCGGACCGTGCGCTGTTCCGGGCGGGG
301 ACGGCACCGCTGGTGGCGTTCCTCGACCGGACGGACAAGCTCGTGCCGCT
351 CGGCCAGGAGCACACGCTGGGTGACTTCGACGGCAACCTGGAGGACGCAC
401 TGGGCCGCGATCCTCGCCGAGGAGCAGAACGCCGGCTGA.
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2. (Amended) A method for producing a filamentous bacterium exhibiting enhanced fragmentation during growth, [particularly growth in a liquid medium,] said method comprising:

providing a filamentous bacterium, wherein said filamentous bacterium lacks significant endogenous ssgA activity, with the capability of having or expressing heterologous ssgA-activity, which activity in *Streptomyces Griseus* is encoded by an ssgA gene having the sequence:

1 ATGCGCGAGTCGGTTCAAGCAGAGGTCATGATGAGCTTCCTCGTCTCCGA
 51 GGAGCTCTCGTTCCGTATTCCGGTGGAGCTCCGATACGAGGTCGGCGATC
 101 CGTATGCCATCCGGATGACGTTCCACCTTCCCGGCGATGCCCCCTGTGACC
 151 TGGGCGTTTCGGCCGCGAGCTGCTGCTGGACGGGCTCAACAGCCCGAGCGG
 201 CGACGGCGATGTGCACATCGGCCCCGACCGAGCCCGAGGGCCTCGGAGATG
 251 TCCACATCCGGCTCCAGGTCGGCGCGGACCGTGCGCTGTTCCGGGCGGGG
 301 ACGGCACCGCTGGTGGCGTTCCTCGACCGGACGGACAAGCTCGTGCCGCT
 351 CGGCCAGGAGCACACGCTGGGTGACTTCGACGGCAACCTGGAGGACGCAC
 401 TGGGCCGCGATCCTCGCCGAGGAGCAGAACGCCGGCTGA.

3. (Amended) The method according to claim 1 [or 2], wherein said additional SsgA-activity is provided by transfecting or transforming said filamentous bacterium with additional genetic information encoding said activity.

8. (Amended) The method according to [any one of claims 3-7]claim 3, wherein said additional genetic information is integrated into the bacterial genome.

9. (Amended) The method according to [any one of claims 3-8]claim 3, wherein said additional genetic information is part of an episomal element.

10. (Amended) The method according to [any of the foregoing claims]claim 3, wherein said filamentous bacterium does not have significant endogenous ssgA-activity.

11. (Amended) The method according to [any one of the foregoing claims]claim 3 wherein said ssgA-activity is inducible or repressible with a signal.

12. (Amended) The method according to [any one of the aforementioned claims]claim 3 wherein said filamentous bacterium is an Actinomyces.

14. (Amended) The method according to [any one of the foregoing claims]claim 3 wherein said filamentous bacterium produces a useful product.

18. (Amended) The method according to claim 16 [or 17], wherein said protein is expressed from a vector encoding said protein present in said filamentous bacterium.

19. (Amended) The method according to claim [16, 17 or] 18, wherein said protein is secreted by said filamentous bacterium.

20. (Amended) A filamentous bacterium [obtainable]produced by [a]the method according to [any one of the foregoing claims]claim 3.

22. (Amended) A method for producing an antibiotic or a useful protein comprising culturing a filamentous bacterium according to claim 19 [or 21] and harvesting said antibiotic or protein from said culture.

Please add the following new claims:

24. The method according to claim 2, wherein said additional SsgA-activity is provided by transfecting or transforming said filamentous bacterium with additional genetic information encoding said activity.

25. The method according to claim 24, wherein said additional genetic information comprises an ssgA gene or a derivative or fragment thereof encoding similar SsgA-activity.

26. The method according to claim 25, wherein said ssgA gene is derived from an actinomycete.

27. The method according to claim 25, wherein said gene is derived from a streptomycete.

28. The method according to claim 27, wherein said gene is derived from *Streptomyces griseus*, *Streptomyces collinus*, *Streptomyces albus*, *Streptomyces goldeniensis* or *Streptomyces netropsis*.

Remarks

The application is to be amended as previously set forth. All amendments, including the cancellation of claims, are made without prejudice or disclaimer. The amendments are made to bring the application closer to United States practice, such as, by example, removing multiple claim dependencies and to remove claims redundant with the parent application.

If questions exist after consideration of the foregoing, the Office is kindly requested to contact the applicants' representative at the address or telephone number below.

Respectfully submitted,



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Date: December 26, 2000